P-3 Orion - WFF 04/15/19

Aircraft: P-3 Orion - WFF (See full schedule)
Flight Number: #2086: 2019 OIB Science Flight #8
Payload Configuration: Operation IceBridge

Nav Data Collected: No Total Flight Time: 4.8 hours

Submitted by: Kelly Griffin on 04/15/19

Flight Segments:

From:	BGTL	То:	BGTL	
Start:	04/15/19 14:07 Z	Finish:	04/15/19 18:54 Z	
Flight Time:	4.8 hours			
Log Number:	<u>19P017</u>	PI:	Joseph MacGregor	
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program			
Purpose of Flight:	Science			
Miles Flown:	1243 miles			

Flight Hour Summary:

	19P017
Flight Hours Approved in SOFRS	250
Total Used	216.3
Total Remaining	33.7

19P017 FI	19P017 Flight Reports					
Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
03/26/19	#2053: 2019 OIB ATF	Check	0.9	0.9	249.1	0
03/27/19	#2059: 2019 OIB PTF-Laser	Check	2.3	3.2	246.8	0
03/28/19	#2061: 2019 OIB PTF-Radar	Check	3.2	6.4	243.6	0
04/01/19	#2068: 2019 OIB WFF-BGTL Transit Flight	Transit	6.9	13.3	236.7	2458
04/03/19	#2070: 2019 OIB Science Flight #1	Science	7.6	20.9	229.1	1938
04/05/19	#2072: 2019 OIB Science Flight #2	Science	7.7	28.6	221.4	1910
04/06/19	#2073: 2019 OIB Science Flight #3	Science	7.2	35.8	214.2	2000
04/08/19	#2075: 2019 OIB Science Flight #4	Science	6.9	42.7	207.3	1780
04/09/19	#2076: 2019 OIB Science Flight #5	Science	7.8	50.5	199.5	2045
04/10/19	#2081: 2019 OIB Science Flight #6	Science	10.1	60.6	189.4	2702
04/11/19	#2082: BGSF-BGTL Transit	Transit	2.2	62.8	187.2	696
04/12/19	#2083: 2019 OIB Science Flight #7	Science	7.2	70	180	2109
04/15/19	#2086: 2019 OIB Science Flight #8	Science	4.8	74.8	175.2	1243
04/16/19	#2087: 2019 OIB Science Flight #9	Science	7.6	82.4	167.6	2036

04/17/19	#2088: 2019 OIB Science Flight #10	Science	7.7	90.1	159.9	1937
04/18/19	#2090: 2019 OIB Science Flight #11	Science	7.8	97.9	152.1	2008
04/19/19	#2091: 2019 OIB Science Flight #12	Science	7.6	105.5	144.5	2104
04/20/19	#2092: 2019 OIB Science Flight #13	Science	6.9	112.4	137.6	0
04/22/19	#2094: 2019 OIB Science Flight #14	Science	6.6	119	131	1867
04/23/19	#2099: 2019 OIB Science Flight #15	Science	7.7	126.7	123.3	1979
04/25/19	#2102: 2019 OIB BGTL-KBGR Transit Flight	Transit	6.2	132.9	117.1	0
04/26/19	KBGR to BGSF Transit	Transit	5.7	138.6	111.4	0
05/05/19	2019 OIB Science Flight #16	Science	7.8	146.4	103.6	0
05/06/19	2019 OIB Science Flight #17	Science	8.4	154.8	95.2	0
05/07/19	2019 OIB Science Flight #18	Science	8.5	163.3	86.7	0
05/08/19	2019 OIB Science Flight #19	Science	8	171.3	78.7	0
05/12/19	2019 OIB Science Flight #20	Science	9	180.3	69.7	0
05/13/19	2019 OIB Science Flight #21	Science	7	187.3	62.7	0
05/14/19	2019 OIB Science Flight #22	Science	7.9	195.2	54.8	0
05/15/19	2019 OIB Science Flight #23	Science	8.3	203.5	46.5	0
05/16/19	2019 OIB Science Flight #24	Science	6.3	209.8	40.2	0
05/17/19	2019 OIB Transit	Transit	6.2	216	34	0
05/17/19	2019 OIB Transit	Transit	0.3	216.3	33.7	0

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

OIB - P-3 Orion - WFF 04/15/19 Science Report

Mission: OIB
Mission Summary:

Mission: North Ellesmere 01

Priority: Low

This mission is designed as part of OIB's multi-year dh/dt repeat strategy, and based both on the ATM surveys of the Canadian ice caps dating back to 1995, and to flightlines designed with Dave Burgess and Martin Sharp as part of a CSA/NASA agreement in 2014 and flown that same year. This mission concentrates on the northern Ellesmere ice field and on the Agassiz Ice Cap in east-central Ellesmere. For the northern ice field, we fly a historical ATM line traversing the ice from southwest to northeast plus centerlines of the major glaciers draining the ice field. We also fly a number of such glaciers on Agassiz, along with a pair of historical ATM lines.

After a slow start this morning due to a maintenance issues, we opted for a shortened version of the mission best suited to the remaining airfield hours. We flew only the southern half of this mission over the Agassiz Ice Cap. The first glacier, Joliffe, appeared to be fairly stagnant but its terminus was surrounded by impressively steep topography. Otherwise, we alternated between crossing the ice cap and navigating sharp turns in some of its outlet glaciers under typically overcast conditions. ATM T6 had a minor freeze at the very beginning of the survey, but otherwise performed well and ATM reports 99% altimetry data collection. Headwall SWIR also froze up and was quickly rebooted. MCoRDS and Snow Radar performed well.

Attached images:

- 1. Map of today's mission (John Sonntag / NASA)
- 2. Dry supraglacial river channel on mostly stagnant Joliffe Glacier (Joe MacGregor / NASA)
- 3. Mountains along the eastern flank of Ellesmere Island (Joe MacGregor / NASA)
- 4. Folded stratigraphy exposed along the mountain flanks of Dobbin Glacier (John Sonntag / NASA)
- 5. The edge of the main section of the Agassiz Ice Cap (Aaron Wells / IU)

Images:

Map of today's mission



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Dry supraglacial river channel on mostly stagnant Joliffe Glacier



Read more

Mountains along the eastern flank of Ellesmere Island



Read more

Folded stratigraphy exposed along the mountain flanks of Dobbin



Read more

The edge of the main section of the Agassiz Ice Cap Read more Submitted by: Joseph MacGregor on 04/18/19

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